Application

For

United States Utility Patent

Title:	INFLATABLE HUMANIOD FORMS
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CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of co-pending US application S/N 09/940,301 entitled, "Inflatable Humanoid Forms," filed on 08/27/2001. The parent US application S/N 09/940,301 and co-pending divisional application S/N 10/368,501 entitled, "Inflatable Humanoid Forms," filed on 02/15/2003, both to the same inventor of record are herein incorporated by reference in their entirety.

FEDERALLY SPONSORED RESEARCH AND DEVELOPMENT

Not Applicable

REFERENCE TO A MICROFICHE APPENDIX

Not Applicable

FIELD OF INVENTION

The present invention relates to an apparatus for use in filming or photographing crowd scenes typically in stadium type settings. The apparatus consists of one or more inflatable humanoid figures, which are configured to fit into stadium type seating in varying locations so as to provide the illusion of a filled stadium or equivalent to a camera or video recorder. Other non-seated embodiments of the invention are included as well.

BACKGROUND OF INVENTION

The current art involving the filming of background crowd scenes for example, inside stadium or auditorium type seating requires that two-dimensional figures be placed as props in or near the seats. These props are generally constructed of cardboard or other similar materials, which are heavy, relatively inflexible, difficult to transport, time consuming to install and remove and are susceptible to wet or windy weather conditions.

Another disadvantage in using the cardboard props concerns the limited field of view provided by the two dimensional shapes. Movie and photographic scenes need to be reconfigured to avoid exposing the unfinished sides or rear of the props to the camera, thus incurring lost time and increasing production costs.

A further disadvantage concerns the amount of storage space required for the props. The cardboard cutout figures used in the current art are generally constructed of one or two life-sized components requiring multiple large storage boxes and correspondingly large amounts of storage space when not in use.

In other applications, inflatable mannequins are known in the art for use in modeling apparel as is disclosed by Miller Pat. No. 2,698,496, Wolf Pat. No. 3,028,058 and Gross Pat. No. 5,419,729; as a toy or doll as is disclosed by Hornsby Pat. No. 4,259,805 and Pietrafesa Pat. No. 6,030,271 and as motor vehicle security device Brown Pat. No. 5,367,294. However, none of the prior art teaches or suggests an inflatable humanoid figure for use as a prop in background scenes associated with motion picture, video, television or still photography.

SUMMARY

This invention provides an apparatus, which is used to provide three-dimensional human-like shapes as props to enhance the visual effect of large numbers of people typically required in crowd scenes in film, video and still photography. The invention comprises life-sized inflatable humanoid figures that resemble human beings and are constructed of lightweight plastic or similar elastomeric materials. The inflatable props include at least one rapid fill and relief valve situated in an inconspicuous location on the humanoid figure.

The use of life-sized inflatable humanoid figures allows the use of existing wardrobes, makeup and other accoutrements necessary for rendering a realistic visual effect. Other human attributes including apparel, facial, gender and racial characteristics may be incorporated into the invention at time of manufacture. Lastly, the humanoid figures may be manufactured in varying sizes and shapes to simulate the natural variations in human forms.

In the preferred embodiment, groupings of about four life-sized humanoid figures each comprising torso members, arm members, neck members and head members are contiguously connected together by narrow tubular sections located on one or more sides of the forms. The tubular sections permits inflation gas to flow into and out of each internal cavity of the props and also provides a means of anchoring the props in their proper seated positions.

The tubular sections are fabricated on the lower sides of the humanoid figures so as to be invisible to a camera when placed in a seated position. In situations where a smaller number of humanoid figures are required, it is envisioned that individual humanoid figures will be manufactured allowing selected placement between the multi-body forms and single body forms. Alternately, excess humanoid figures may be removed from the desired humanoid figures by cutting the interconnecting tubular sections and sealing the open end with a bonding agent, tape or clamp. The flexible nature of the invention allows installation in both standard and non-standard seating arrangements. In windy locations, it is envisioned that the props may be held in place by tape, adhesive, Velcro, weights, tie downs or other similar means.

In a second embodiment of the invention, life-sized humanoid figures each complete with feet, legs, torso, arms, neck and head are intended to be employed in background situations requiring human forms in non-seated backgrounds scenes. Other attributes of this embodiment of the invention are equivalent to those described in the preferred embodiment.

In a third embodiment of the invention, life-sized humanoid figures each complete with feet, legs and lower torso are intended to be employed in background situations requiring the lower portions of human forms in backgrounds scenes. Other attributes of this embodiment of the invention are equivalent to those described in the preferred embodiment.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 - Figure 1 depicts a frontal view of the preferred embodiment of the invention where a plurality of humanoid figures configured for use in stadium type seating.

FIG. 2 - Figure 2 depicts a top view of the preferred embodiment of the invention.

FIG. 3 - Figure 3 depicts a side view of the preferred embodiment of the invention.

FIG. 4 - Figure 4 depicts a bottom view of the preferred embodiment of the invention.

FIG. 5 - Figure 5 depicts a rear view of the preferred embodiment of the invention including a fill valve.

FIG. 6 - Figure 6 depicts a prospective view of the preferred embodiment.

FIG. 7 - Figure 7 depicts filling of a plurality of humanoid figures through a fill valve.

FIG. 8 - Figure 8 depicts a frontal view of the preferred embodiment where a single humanoid figure configured for use in stadium type seating.

FIG. 9 - Figure 9 depicts a side view of the preferred embodiment of the single humanoid figure configured for use in stadium type seating.

FIG. 10 - Figure 10 depicts a rear view of the preferred embodiment where a single humanoid figure configured for use in stadium type seating.

FIG. 11 - Figure 11 depicts a top view of the preferred embodiment where a single humanoid figure configured for use in stadium type seating.

FIG. 12 - Figure 12 depicts a bottom view of the preferred embodiment where a single humanoid figure configured for use in stadium type seating.

FIG. 13 - Figure 13 depicts a front view of the preferred embodiment where a plurality of humanoid figures configured for use where standing forms are desired.

FIG. 14 - Figure 14 depicts a perspective view of the preferred embodiment where a plurality of humanoid figures configured for use where standing forms are desired.

FIG. 15 - Figure 15 depicts a rear view of the preferred embodiment where a plurality of humanoid figures configured for use where standing forms are desired.

FIG. 16 - Figure 16 depicts a bottom view of the preferred embodiment where a plurality of humanoid figures configured for use where standing forms are desired.

FIG. 17 - Figure 17 depicts a front view of the preferred embodiment where a single humanoid figure is configured for use where a standing form is desired.

FIG. 18 - Figure 18 depicts a perspective view of the preferred embodiment where a single humanoid figure is configured for use where a standing form is desired.

FIG. 19 - Figure 19 depicts a perspective view of the preferred embodiment where a lower torso including legs is desired.

FIG. 20 - Figure 20 depicts a rear view of the preferred embodiment where a lower torso including legs is desired.

DETAILED DESCRIPTION

This invention comprises one or more life-sized inflatable humanoid figures that resemble human forms. The humanoid figures are constructed of lightweight plastic or similar elastomeric materials. The inflatable props include at least one rapid fill and relief valve situated on the underside, side or rear of the humanoid figure assembly. In the preferred embodiment, single humanoid figures or groupings of about four life-sized humanoid figures each comprising torso members, arm members, neck members and head members are contiguously connected together by narrow tubular sections located on one or more sides of the forms. The tubular sections permits inflation gas to flow into and out of each internal cavity of the props and also provides a means of anchoring the props in their proper seated positions. The props are placed in background scenes and inflated. Additional wardrobe and other accoutrements may be included as necessary to conform to set requirements and to provide realistic background motion. The humanoid figures are placed into their seats with the necessary wardrobe typically intermingled with live actors or extras to provide a more realistic background setting. Filming of the humanoid figures occurs generally outside the focal range of the camera. Thus, the humanoid figures appear life-like to the camera and resulting viewing media.

Reviewing this specification in conjunction with the drawings facilitates a better understanding of the invention. Drawing tag reference numbers are replicated in the various views and embodiments of the invention. To the extent possible, drawing tag references numbers are discussed only once to limit prolixity of the specification.

Referring to FIG. 1, a frontal view of the preferred embodiment of the invention is shown including about four humanoid figures 10a, 10b, 10c, 10d for use in crowd scenes in which a seated position is advantageous. The humanoid figures in this embodiment are configured such that the consecutive arm sections 18a, 20a, 18b, 20b, 18c, 20d and gaps between each humanoid figure's waist section fit over the armrests of stadium type seating. The trunk portion of each humanoid figure 22a, 22b, 22c, 22d rests in the actual seat portion of the seat.

In this embodiment of the invention, each humanoid figure is manufactured to include a contiguous gas-tight cavities 26a, 26b, 26c, 26d between adjacent humanoid figures, which allows inflating gas to fill the entire line of humanoid figures including the head members 10a, 10b, 10c, 10d, neck members 14a, 14b, 14c, 14d, left arm members 20a, 20b, 20c, 20d and right arm members 18a, 18b, 18c, 18d and torso members 22a, 22b, 22c, 22d.

Human characteristics such as hair, eyes, nose, mouth, eyebrows, ears, breasts and skin color may be included during the manufacturing process by applying a painting, pigmenting, silk screening or other coloring process. Alternately or in combination therewith, human characteristics and natural body contours may be included during the molding process to improve the human likeness.

Referring to FIG. 2, a top view of the preferred embodiment 10a, 10b, 10c, 10d is depicted illustrating the three dimensional aspect of the invention 24a, possible apparel designs and various human characteristics 12a. This view also illustrates the contiguous gas-tight cavities 26a, 26b, 26c, 26d between adjacent humanoid figures, which allows inflating gas to fill the entire line of humanoid figures.

Referring to FIG. 3, a side view of the preferred embodiment 10a is depicted which again illustrates the three dimensional aspect of the invention 24a, possible apparel designs and various human characteristics 12a.

Referring to FIG. 4, a bottom view of the preferred embodiment is depicted which illustrates the unit torso base member 22a, 22b, 22c, 22d and arm member spacing along with the contiguous gas-tight cavities 26a, 26b, 26c, 26d.

Referring to FIG. 5, a rear view of the preferred embodiment is depicted which illustrates the possible apparel and human characteristics 12a, 12b, 12c, 12d along with the contiguous gas-tight cavities 26a, 26b, 26c, 26d and a fill valve 28. A single fill valve 28 is depicted on the right most form for convenience only.

Referring to FIG. 6, a perspective view of the preferred embodiment is depicted which illustrates the three dimensional nature 24a, 24b, 24c, 24d of the invention, possible apparel designs and various human characteristics 12a, 12b, 12c, 12d.

Referring to FIG. 7, a diagrammatic view depicting the filling of contiguous internal chambers 26a, 26b, 26c, 26d through a fill valve 28, which inflates the humanoid figures 10a, 10b, 10c, 10d. A single fill valve 28 is depicted on the rear of the right most form for convenience only. A fill valve 28 may be located on any of the forms in any inconspicuous location. Additional fill valves may be provided to allow faster inflation and deflation of the humanoid figures. The fill valves used for this invention are similar in design to those employed in camping style air mattresses which allows high volumes of air to flow into and out of the internal cavities of the humanoid figures.

Referring to FIG. 8, a front view of the single humanoid figure embodiment of the invention is depicted comprising a head member 110a, neck member 114a, left arm member 120a and right arm member 118a and a torso member 122a.

This embodiment of the invention allows individual humanoid figures to be placed in background scenes where it is desirable to employ one or more single humanoid figures, for example on a park bench that is visible in a background scene which may include an extra seated next to the humanoid figure. The single humanoid figure design is equivalent in all aspects to the multi-figure design other than the number of humanoid figures and contiguous gas-tight cavities.

Referring to FIG. 9, a side view of the single humanoid figure embodiment of the invention is depicted which again illustrates the three dimensional aspect of the invention 124a. As discussed in FIG. 8, the single humanoid figure design is equivalent in all aspects to the multi-figure design other than the number of humanoid figures.

Referring to FIG. 10, a rear view 124a of the single humanoid figure embodiment of the invention is depicted. A fill valve 128 is shown on the rear of the individual humanoid figure for convenience only. The fill valve 128 may be located on any part of the humanoid figure, which would not be visible to a camera. All other aspects of the single humanoid figure are equivalent to the multi-figure units previously described.

Referring to FIG. 11, a top view 110a of the single humanoid figure embodiment of the invention is depicted. The single humanoid figure embodiment lack the contiguous gas-tight cavities included in the multi-figure units. All other aspects of the single humanoid figure are equivalent to the multi-figure units previously described.

Referring to FIG. 12, a bottom view 122a of the single humanoid figure embodiment of the invention is depicted. The single humanoid figure embodiment is designed to fit into stadium and/or auditorium style seating in a loose fit arrangement. The flexible nature of the humanoid figure's construction material allows use of the humanoid figure in non-standard seating arrangements. All other aspects of the single humanoid figure are equivalent to the multi-figure units previously described.

Referring to FIG. 13, a frontal view of the preferred embodiment of the invention is shown including about four humanoid figures for use in crowd scenes in which a standing position and/or a full frontal view is advantageous. This embodiment comprises head members 210a, 210b, 210c, 210d, neck members 214a, 214b, 214c, 214d, left arm members 220a, 220b, 220c, 220d and right arm members 218a, 218b, 218c, 218d, torso members 222a, 222b, 222c, 222d and left leg members 232a, 232b, 232c, 232d and right 230a, 230b, 230c, 230d leg members.

Human characteristics 212a, 212b, 212c, 212d such as hair, eyes, nose, mouth, eyebrows, ears, breasts and skin color may be included during the manufacturing process by applying paint, adding pigments to the polymers, silk screening or other coloring process. The humanoid figures may be supported by tape, adhesive, Velcro, weights, tie downs or other similar means. All other aspects of the standing humanoid figures are equivalent to the multi-figure seated units previously described.

Referring to FIG. 14, a perspective view of the another embodiment of the invention is shown including about four complete humanoid forms for use in crowd scenes in which a standing position and/or a full frontal view is advantageous. This view again illustrates the three dimensional nature 224a, 224b, 224c, 224d of the invention, which allows a greater range for viewing by a camera over the prior art cardboard cutout figures. A side view of this embodiment of the invention is omitted since its appearance is similar to the views shown in FIG.3 and FIG. 9 with the inclusion of legs 230a, 232a, 230b, 232b, 230c, 232c, 230d, 232d and possible shoe and apparel designs. All other aspects of the standing humanoid figures are equivalent to the multi-figure seated units previously described.

Referring to FIG. 15, a rear view 224a, 224b, 224c, 224d of the preferred embodiment of the invention is shown including about four complete humanoid forms for use in crowd scenes in which a standing position and/or a full frontal view is advantageous. This view again illustrates the three dimensional nature of the invention which allows a greater range for viewing by a camera over the prior art cardboard cutout figures. All other aspects of the standing humanoid figures are equivalent to the multi-figure seated units previously described.

Referring to FIG. 16, a bottom view of the preferred embodiment of the invention is shown including about four complete humanoid forms for use in crowd scenes in which a standing position and/or a full frontal view is advantageous. This view illustrates the base of each humanoid figure included in this embodiment of the invention, which allows the humanoid figures to be configured in standing positions by anchoring the base of one or more of the humanoid figures using the methods previously described. Also shown is the contiguous gas-tight cavities 226a, 226b, 226c, 226d.

Referring to FIG. 17, a frontal view of another embodiment of the invention is shown including a single complete form for use in crowd scenes in which a standing position and/or a full frontal view is advantageous. This embodiment of the invention comprises a head member 310a a neck member 314a left 320a and right arm members 318a a torso member 322a and left 332a and right 330a leg members.

Human characteristics 312a such as hair, eyes, nose, mouth, eyebrows, ears, breasts and skin color may be included during the manufacturing process by applying paint, pigmenting, silk screening or other coloring process. Other than the lack of adjoining contiguous gas-tight cavities and adjacent humanoid figures, all other aspects of the standing humanoid figures are equivalent to the multi-figure standing humanoid figures previously described.

Referring to FIG. 18, a perspective view of the preferred embodiment of the invention is shown including a single form for use in crowd scenes in which a standing position and/or a full frontal view is advantageous. This view again illustrates the three dimensional nature 324a of the invention, which allows a greater range for viewing by a camera over the prior art cardboard cutout figures. Other than the lack of adjoining contiguous gas-tight cavities and adjacent humanoid figures, all other aspects of the standing humanoid figures are equivalent to the multi-figure standing units previously described.

Referring to FIG. 19, a frontal view of another preferred embodiment of the invention is shown comprising a single lower torso member 422a, left 430a and right leg 432a members. This embodiment of the invention is used in situations where only the lower portions of a human body are advantageous. All other aspects of the lower portions of this embodiment are equivalent to the single standing humanoid figure unit previously described. Top, perspective, side and bottom and multiple grouping views of this embodiment of the invention have been omitted as previously described views adequately cover the features associated with inventive embodiment.

Referring to FIG. 20, a rear view of the preferred embodiment of the invention is shown illustrating the location of a fill valve 428. As previously discussed, the fill valve may be located on other inconspicuous parts of the humanoid figure. All other aspects of the standing humanoid figures are equivalent to the multi-figure seated units previously described.

Filming of the humanoid figures occurs generally outside the focal range of the camera. Thus, the humanoid figures appear life-like to the camera and resulting viewing media. The visual recording media productions includes visual recordings of a corporate training session, a lecture, a video media production, television programs, motion pictures, still photography, advertising, corporate conventions or cinematographic productions video productions, television programs, motion pictures, still photography, advertising, corporate conventions or cinematographic productions. For the seated version, the inflatable humanoid figures are placed into one or more seats in a background scene. The seats include a park bench, stadium and/or auditorium style seating. In windy locations, it is envisioned that the inflatable humanoid figures may be held in place by tape, adhesive, Velcro, weights, tie downs or other similar means.

For the standing version of the life-sized humanoid figures, each complete with feet, legs, torso, arms, neck and head are placed in background scenes where a standing position and/or a full frontal view is advantageous. The humanoid figures are supported in standing positions by anchoring the base of one or more of the humanoid figures using tape, adhesive, Velcro, weights, tie downs or other similar means. Excess humanoid figures may be removed from the desired humanoid figures by cutting the interconnecting tubular sections and sealing the open end with a bonding agent, tape or clamp.

The foregoing described embodiments of the invention are provided as illustrations and descriptions. They are not intended to limit the invention to precise form described. In particular, it is contemplated that functional implementation of the invention described herein may be implemented in any visual recording media requiring simulated participants including corporate training session, lectures, video media and film media productions and still photography. Other variations and embodiments are possible in light of above teachings, and it is not intended that this Detailed Description limit the scope of invention.